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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/554,954	07/24/2000	MATS LEJON	9847-0056-6X	8003

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EXAMINER

PEREZ, GUILLERMO

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 04/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/554,954

Applicant(s)

LEIJON, MATS

Examiner

Guillermo Perez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-90 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 41-90 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 46-95 been renumbered 41-90.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 41-65, 70-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuznetsov (U. S. Pat. 5,483,111) in view of Elton et al. (U. S. Pat. 5,036,165).

Kuznetsov substantially teaches the claimed invention except that it does not show that the surrounding electrical insulation have a semiconducting inner layer, a semiconducting outer layer, and an intermediate layer of electrically insulating material positioned between the semiconducting inner layer and the semiconducting outer layer. Kuznetsov does not disclose that the semiconducting inner layer being electrically connected to the conductor so as to be at a same electric potential as the conductor.

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Kuznetsov does not disclose that the semiconducting outer layer being connected along a length thereof to a node held at a controlled electric potential. Kuznetsov does not disclose that the semiconducting outer layer being connected at spaced apart regions to the node. Kuznetsov does not disclose that the controlled electric potential being earth potential.

Kuznetsov does not disclose that at least one pair of adjacent layers of the inner layer, the intermediate layer, and the outer layer being secured to each other along substantially respective contact surfaces. Kuznetsov does not disclose that when the semiconducting outer layer being connected to earth potential, an electric field of the high voltage rotating electric machine at both the slots and the end winding region being near zero. Kuznetsov does not disclose that the inner semiconducting layer having a first plastics material having first electrically conductive particles dispersed therein; the equipotential outer layer having a second plastics material having second electrically conductive particles dispersed therein; and the intermediate layer of electrical insulation having a third plastics material.

Elton et al. disclose that the surrounding electrical insulation have a semiconducting inner layer (104), a semiconducting outer layer (110), and an intermediate layer of electrically insulating material (106) positioned between the semiconducting inner layer (104) and the semiconducting outer layer (110). Elton et al. disclose that the semiconducting inner layer (104) being electrically connected to the conductor (102) so as to be at a same electric potential as the conductor (102). Elton et al. disclose that the semiconducting outer layer (110) being connected along a length

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thereof to a node (112) held at a controlled electric potential. Elton et al. disclose that the semiconducting outer layer (110) being connected at spaced apart regions to the node (112). Elton et al. disclose that the controlled electric potential being earth potential.

Elton et al. disclose that at least one pair of adjacent layers of the inner layer (104), the intermediate layer (106), and the outer layer (110) being secured to each other along substantially respective contact surfaces. Elton et al. disclose that when the semiconducting outer layer (110) being connected to earth potential, an electric field of the high voltage rotating electric machine at both the slots and the end winding region being near zero. Elton et al. disclose that the inner semiconducting layer (104) having a first plastics material having first electrically conductive particles dispersed therein; the equipotential outer layer (110) having a second plastics material having second electrically conductive particles dispersed therein; and the intermediate layer (106) of electrical insulation having a third plastics material. The invention of Elton et al. has the purpose of avoiding the formation of a corona discharge when an electrical potential exists between the conductor and the region adjacent the exterior surface of the insulator.

It would have been obvious at the time the invention was made to modify the high voltage electrical machine of Kuznetsov and provide it with the insulation configuration disclosed by Elton et al. for the purpose of avoiding the formation of a corona discharge when an electrical potential exists between the conductor and the region adjacent the exterior surface of the insulator.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to specify the strength and coefficient of thermal expansion of the insulation layers since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Referring to claim 78, no patentable weight has been given to the method of manufacturing limitations (i. e. joint/applied together by multi-layer extrusion die) since "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to select each of the first plastics material, the second plastics material and the third plastics material from at least one of an ethylene butyl acrylate copolymer rubber, an ethylene-propylene-diene monomer rubber (EPDM), an ethylene-propylene copolymer rubber (EPR), LDPE, HDPE, PP, PB, PMP, XLPE, EPR, and a silicone rubber since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

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2. Claims 66-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuznetsov in view of Elton et al. as applied to claims 50-51 above, and further in view of Redfern (UK 468,827).

Kuznetsov and Elton et al. substantially teaches the claimed invention except that it does not show that each of the at least one slot having a plurality of substantially circular cylindrical openings extending axially and radially outside one another, at least one pair of adjacent openings being joined by a narrower waist portion. Neither Kuznetsov nor Elton et al. disclose that a radii of the plurality of substantially circular cylindrical openings decrease in a direction away from a yoke portion of a laminated core of the stator.

Redfern discloses that each of the at least one slot having a plurality of substantially circular cylindrical openings extending axially and radially outside one another, at least one pair of adjacent openings being joined by a narrower waist portion. Redfern discloses that a radii of the plurality of substantially circular cylindrical openings decrease in a direction away from a yoke portion of a laminated core of the stator. Redfern's invention has the purpose of giving the machine a suitable leakage value.

It would have been obvious at the time the invention was made to modify the high voltage of Kuznetsov and Elton et al. and provide it with slot configuration disclosed by Redfern for the purpose of giving the machine a suitable leakage value.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-

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5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.



NESTOR RAMIREZ
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Guillermo Perez
April 19, 2002